

Claims

1. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
 - i) contacting a test compound with a KLK9 polypeptide,
 - 10 ii) detect binding of said test compound to said KLK9 polypeptide.
2. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
 - i) determining the activity of a KLK9 polypeptide at a certain concentration of a test compound or in the absence of said test compound,
 - 20 ii) determining the activity of said polypeptide at a different concentration of said test compound.
- 25 3. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of

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- i) determining the activity of a KLK9 polypeptide at a certain concentration of a test compound,
 - ii) determining the activity of a KLK9 polypeptide at the presence of a compound known to be a regulator of a KLK9 polypeptide.
- 5 4. The method of any of claims 1 to 3, wherein the step of contacting is in or at the surface of a cell.
- 10 5. The method of any of claims 1 to 3, wherein the cell is in vitro.
- 6. The method of any of claims 1 to 3, wherein the step of contacting is in a cell-free system.
- 15 7. The method of any of claims 1 to 3, wherein the polypeptide is coupled to a detectable label.
- 8. The method of any of claims 1 to 3, wherein the compound is coupled to a detectable label.
- 20 9. The method of any of claims 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
- 10. The method of any of claims 1 to 3, wherein the polypeptide is attached to a 25 solid support.
- 11. The method of any of claims 1 to 3, wherein the compound is attached to a solid support.
- 30 12. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,

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cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of

- 5 i) contacting a test compound with a KLK9 polynucleotide,
- ii) detect binding of said test compound to said KLK9 polynucleotide.
13. The method of claim 12 wherein the nucleic acid molecule is RNA.
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14. The method of claim 12 wherein the contacting step is in or at the surface of a cell.
15. The method of claim 12 wherein the contacting step is in a cell-free system.
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16. The method of claim 12 wherein polynucleotide is coupled to a detectable label.
17. The method of claim 12 wherein the test compound is coupled to a detectable label.
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18. A method of diagnosing a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
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- i) determining the amount of a KLK9 polynucleotide in a sample taken from said mammal,

- ii) determining the amount of KLK9 polynucleotide in healthy and/or diseased mammals.

19. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which binds to a KLK9 polypeptide.

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20. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which regulates the activity of a KLK9 polypeptide.

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21. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which regulates the activity of a KLK9 polypeptide, wherein said therapeutic agent is

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- i) a small molecule,
- ii) an RNA molecule,
- iii) an antisense oligonucleotide,
- iv) a polypeptide,
- v) an antibody, or
- vi) a ribozyme.

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22. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, 5 cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a KLK9 polynucleotide.

23. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular 10 diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a KLK9 polypeptide.

24. Use of regulators of a KLK9 for the preparation of a pharmaceutical 15 composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal.

25. Method for the preparation of a pharmaceutical composition useful for the 20 treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation 25 disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of

i) identifying a regulator of KLK9,

30 ii) determining whether said regulator ameliorates the symptoms of a disease comprised in a group of diseases consisting of hematological

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diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal; and

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iii) combining of said regulator with an acceptable pharmaceutical carrier.

26. Use of a regulator of KLK9 for the regulation of KLK9 activity in a mammal having a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases.

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